DOCUMENT RESUME

ED 229 150 PS 013 507

AUTHOR White, Donna
TITLE Body Salience, Weight-Role Knowledge-Flexibility and Peer Affiliations between the Ages of Three and Eight Years.
INSTITUTION Concordia Univ., Montreal (Quebec).
SPONS AGENCY Ministry of Education, Quebec (Canada).
PUB DATE 22 Apr 83
NOTE 19p.; Prepared by the Centre for Research in Human Development. Paper presented at the Biennial Meeting of the Society for Research in Child Development (Detroit, MI, April 21-24, 1983).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Age Differences; *Children; Cognitive Ability; *Cognitive Development; Foreign Countries; *Obesity; *Peer Acceptance; Perception Tests; *Role Perception; Sex Differences; *Stereotypes
IDENTIFIERS Canada (French Provinces); Cognitive Research

ABSTRACT

Studies were made of (1) young children's use of body-weight type for processing information about peers, and (2) the development of children's stereotypical knowledge about characteristics associated with body-weight type. For the first study, a measure was developed to assess "body salience," or the degree to which children use weight type as a cue in a matching task. Results indicated that children as young as 3 and 4 establish weight type categories and are cognitively able to acquire information about weight roles. For the second study, an instrument was constructed to assess young children's knowledge and flexible use of weight roles. Responding to pictorial and verbal stimuli, subjects assigned each of 20 attributes (such as polite, quiet, and naughty) to boxes with silhouettes attached. Two boxes displayed either a silhouette of an overweight or a normal weight child; the third had both silhouettes. Subjects systematically attributed only negative traits to the overweight and only positive traits to the normal weight peers. As children grew older, their use of the category illustrated by both weight types increased. Additionally, subjects' affiliative preferences were indicated by having children choose between playing with a same-sex peer of preferred weight status and a same-sex peer of nonpreferred, overweight status who possessed an attractive prop. Significant sex differences were found in the development of affiliative preferences. Further, it was suggested that a relationship exists between attributions and preferences based on weight. (RH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED229150

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
X Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

UNIVERSITÉ CONCORDIA
CONCORDIA UNIVERSITY

Body salience, weight-role knowledge-flexibility and peer affiliations between the ages of three and eight years.

Donna White

Research Bulletins, 1982-83, Vol. I No. 012

CENTRE DE RECHERCHE EN DEVELOPPEMENT HUMAIN

CENTRE FOR RESEARCH IN HUMAN DEVELOPMENT

PS 013507

Paper presented at the Society for Research in Child Development, April 22, 1983.

With thanks to the children, parents and teachers of Westmount Preschool and St. Georges Elementary School in Montreal.

This research was supported by a grant from F.C.A.C. (The Ministry of Education, Province of Quebec).

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Donna White

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

1455 ouest, boul. de Maisonneuve
Montréal, Québec H3G 1M8

The present research deals with weight-type (fat, thin, normal weight) as part of a cognitive schema which children use to process information about peers. I would like to discuss three questions with respect to such a schema:

(1) Do young children use weight type as a dimension for differentiating and catagorizing peers?

(2) Are there developmental patterns in the acquisition of knowledge about weight roles and the rigidity-flexibility with which such knowledge is used?

(3) Are weight type and role knowledge used as the basis for making decisions about affiliative-preferences for peers?

The Salience Matching Study. With respect to the first question, it was hypothesized that children as young as three or four years of age are aware of differences in weight type and can use this dimension to classify peers. A new measure was developed to assess body salience or the degree to which children use weight-type as a matching dimension. The salience measure consists of 14 items (previously piloted and shown to be internally consistent) which give the child the opportunity to match on the basis of either weight-type or some other cue such as activity or facial expression. For example, in Figure 1, the standard shows an overweight boy ready to fight. The subject views the three drawings in the second row and is asked, "Which picture goes best" with the one on top. In this case, the child can match the standard with drawing one, a weight match; drawing two, an activity match; or drawing three, a random match. A deliberate effort is made to minimize cues such as dress or stance as a basis for matching. Position of weight, activity, and random matches are varied. Weight status and sex of the standard are also varied. Physical features other than weight are attractive in all stimuli.

Data is presented for 96 children, three to nine years of age, who made fewer than two random matches. The children were drawn from one preschool and one elementary school, both serving middle to upper middle class families. The sample consists of all children in the age range whose parents agreed to participation.

Figure 2 shows the mean percentage of body matches made by children at each of four age levels. There are roughly equal numbers of boys and girls at each level and a minimum of 20 subjects at each age. As can be seen, preschool children use weight-type as a classification dimension about 36% of the time. Weight-type becomes a less salient sorting dimension with age. By seven to eight years of age, children utilize body weight-type as the dimension for matching only 20% of the time. These data indicated to us that children as young as three to four years establish weight-type catagories and are cognitively able to acquire information about weight roles.

Weight Role Knowledge-Flexibility Study. The next step seemed to be to study the development of weight role knowledge. It was predicted that children begin to acquire information about weight roles by four years of age and that children's knowledge increases with age. At the same time, we expected children to become more flexible in their use of such role knowledge, particularly after the age of seven, with the acquisition of conservation. A new measure was constructed to allow us to attempt to assess knowledge and flexibility of weight roles in young children. Drawing content from studies by Staffieri (1967; 1971) on peer weight stereotypes and from traits noted by Sheldon (1942) to be related to adult body-types, we constructed twenty pictures which the experimenter describes to the subject. For example, the child would be shown the picture in Figure 3 and

asked, "Who would say thank you for these crayons?" or the child would be shown the picture in Figure 4 and the experimenter would say "This mother is angry. Who was naughty and made mother angry?". Children were asked to sort pictures into one of three boxes. One box had a silhouette of an overweight child (same sex), one of a normal weight child, and the third box had both silhouettes attached. The children initially identified the weight-types of the silhouettes--(fat, not fat, regular). For each item, the experimenter points to each box and says something like "Was this girl naughty, or was this girl naughty, or, could either girl be naughty?" Once the children sorted all 20 items, those in the "both" box were removed. The both box was put away and subjects were requested to choose between the overweight and the normal weight boxes. "Who was probably naughty? or "Who is naughty more often - this girl or this girl?"

The task was administered to 107 children from the same preschool and elementary school described in the body salience study. The forty preschool subjects were a new sample. The sixty-seven subjects from the elementary school were the same children who had done the body salience test.

Knowledge of weight roles was measured by calculating how frequently children attributed each item to either the overweight or normal weight silhouette under the forced choice conditions (when the "both" box was removed). Chi squares were calculated on item frequencies for each of 4 age-sex groups. Specific items which were significantly attributed to either the overweight or normal weight child by each group are shown in Figure 5. As can be seen from the figure, subjects systematically attribute only negative traits to the overweight and only positive traits to the normal weight peers. The number of systematically attributed items increases with age for both sexes. However, it

seems that girls begin to acquire weight role information at an earlier age than boys. In our sample, three to five year old girls indicated that overweight is associated with naughty, lazy, and teases. The normal weight traits include smart, neat, affectionate, and generous. Young boys, on the other hand, made no systematic attributions to the overweight and only "likes music" significantly differentiated attributions to the normal weight. By six to nine years, overweight was associated with teases, mean, naughty, and lazy for both sexes. Normal weight was associated with smart, neat, polite, generous, clean, and likes quiet at times.

Flexibility was measured by calculating how frequently children used the "both" catagory. A 2 x 4, sex by age analysis of variance indicated significant age effects ($F = 4.033$, $df = 6$, $p = .001$). Figure 6 shows the mean percent of both attributions for four age groups of boys and girls combined. Children between 36 months and 89 months use the both catagory about 30% of the time. As predicted, both attributions increase to about 49% at 90-109 months.

These results support the idea that stereotypic knowledge and flexibility can be measured independently. Furthermore, both knowledge and flexibility of use of stereotypic information increase with age and seem to parallel the development of logical thought.

The final question addressed in this research was whether any evidence could be found for the use of weight type or role knowledge in determining affiliative preferences of children.

Affiliative preferences. Affiliative preferences were measured by asking children to choose between playing with a same sexed peer of preferred weight status (in nearly all cases- normal weight status) and a same sexed peer of

non-preferred overweight status with an attractive prop. Four affiliative items were used. One of these items is shown in Figure 7. In this situation, children are asked "Who would you like to play in the snow with?"

The affiliative-preference items were given to the 67 elementary school children who were included in the body salience and knowledge of weight roles studies. The mean percent of weight based affiliative-preferences as a function of age and sex are shown in Figure 8. An analysis of variance of these means revealed significant sex differences in the development of affiliative preferences. ($F = 4.329$, $df = 1$, $p = .05$). Post-hoc analyses indicate that in the four-five and six-seven year old groups, girls are more likely than boys to base their affiliative preferences on weight. Boys seem to find the prop a more salient dimension for determining peer preferences at all ages. Both boys and girls find the prop more salient than weight type as a basis for affiliation in the eight-nine year old group.

We also investigated the relationship between weight based affiliative decisions and weight role stereotypes. A rough summary score of stereotypic use was calculated by totaling the number of negative to overweight and positive to normal weight attributions children made in the free choice sort. This stereotype score was correlated with number of weight based preferences for each sex. The correlations were significant for both boys and girls ($r = .38$, $r = .32$, $p = .05$), indicating that attributions and preferences on the basis of weight are related.

In summary, a cognitive-developmental model has been used to predict that catagorization by weight type occurs during the preschool years; that children increasingly organize behavioral attributions around a weight-type schema; that weight-type and role knowledge are related to peer preferences; and that

attributions and preference decisions are modified by determinants other than weight-type as children get older. We also found that sex is a significant factor in determining weight-type schema acquisition and functioning with respect to peer preferences.

References

Sheldon, W.H. The varieties of temperament: a psychology of constitutional differences. New York: Harper, 1942.

Staffieri, J.R. A study of social stereotype of body image in children. Journal of Personality and Social Psychology, 1967, 7, 101-104.

Staffieri, J.R. Body build and behavioral expectancies in young females. Journal of Experimental Psychology, 1972, 6, 125-127.

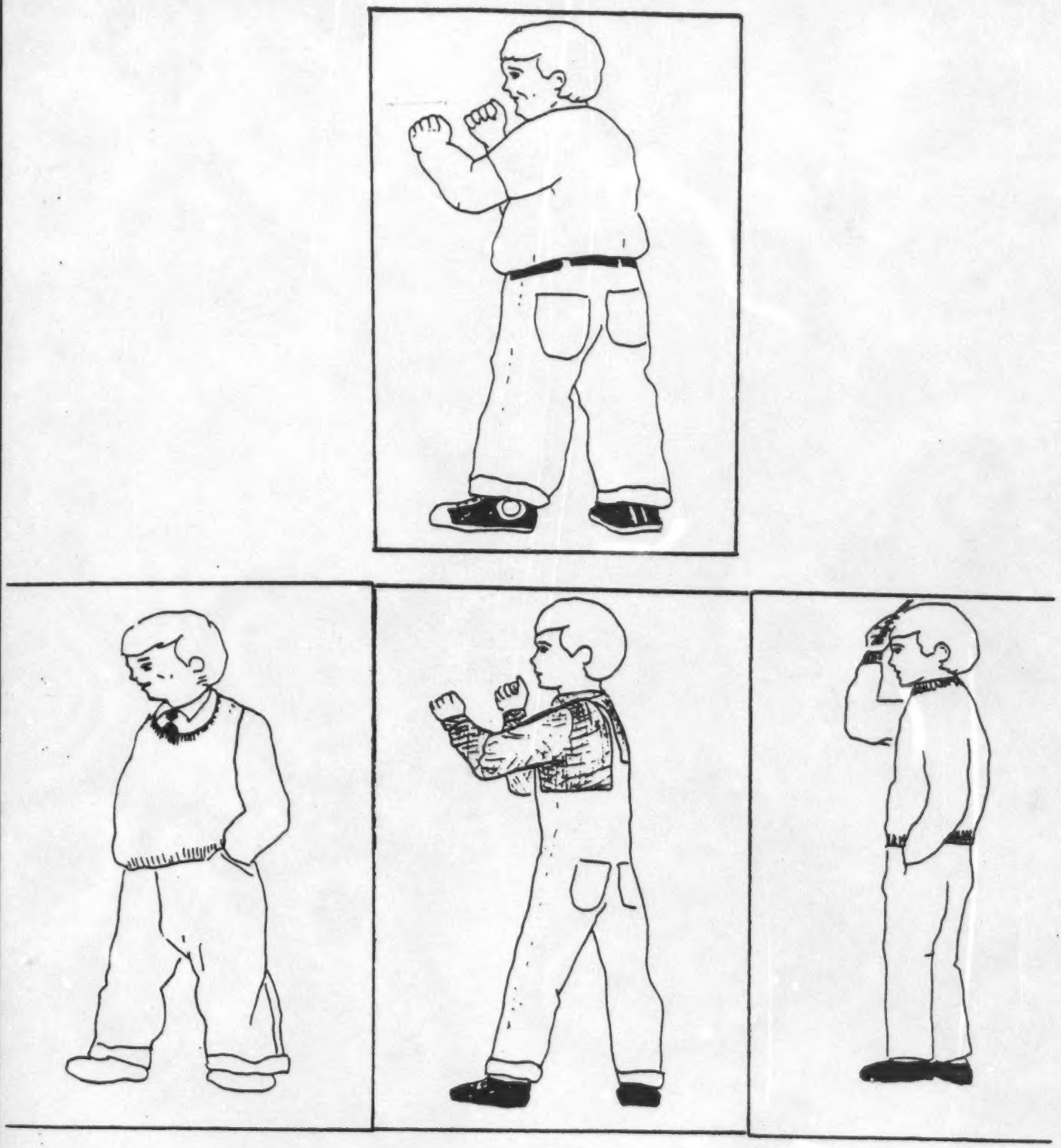
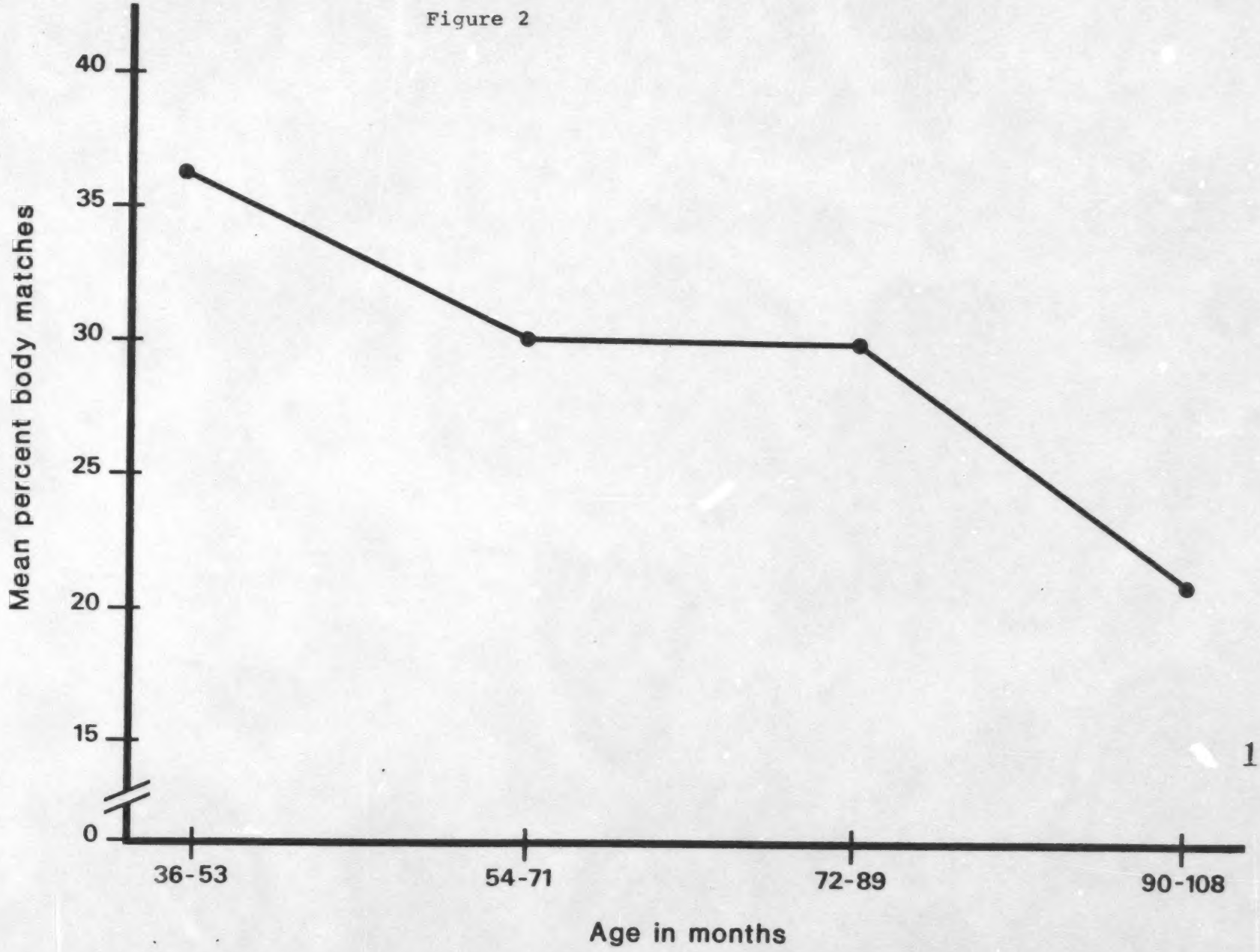


Figure 1

Mean Percent of Body Matches as a Function of Age

Figure 2



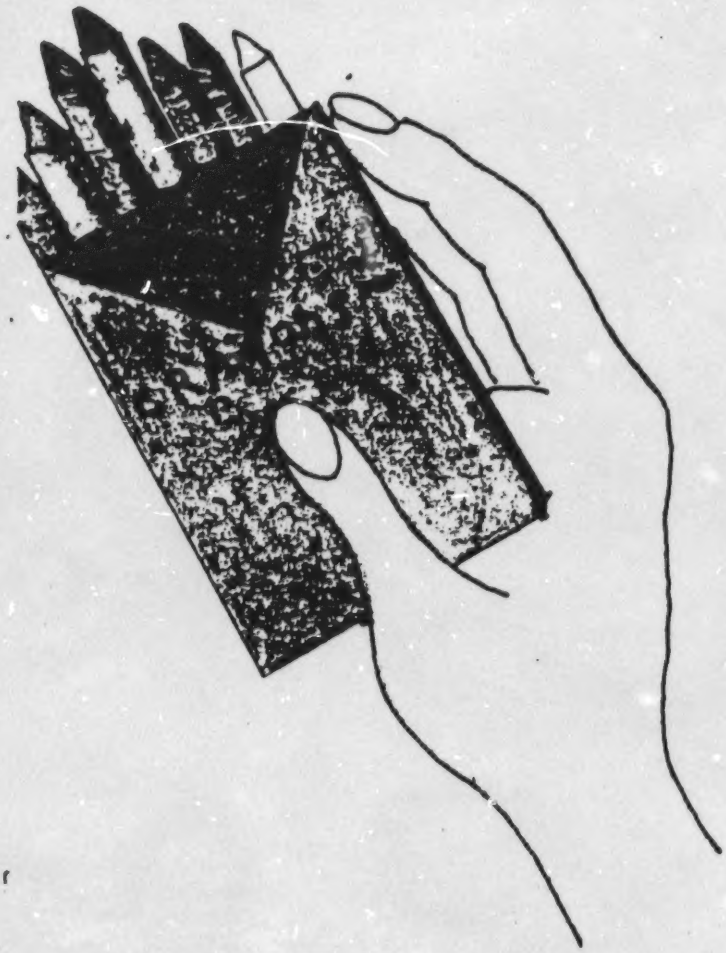


Figure 3

Figure 4

Figure 5

Items Significantly Attributed on the Basis of Weight by Children in each Age-Sex Group.

Young Males (3-5 years) (n = 30)

Normal Weight	Overweight
Likes music	------

Young Females (3-5 years) (n = 29)

Normal Weight	Overweight
Smart	Teases
Neat	Naughty
Generous	Lazy
Affectionate	

Older Males (6-9 years) (n = 24)

Normal Weight	Overweight
Smart	Mean
Neat	Naughty
Generous	Lazy
Polite	Teases
Clean	Sneaky
Quiet	
Plays	
Likes music	

Older Females (6-9 years) (n = 24)

Normal Weight	Overweight
Smart	Mean
Neat	Naughty
Generous	Lazy
Polite	
Clean	
Quiet	

Figure 6 Mean Percent Both Attributions as a Function of Age

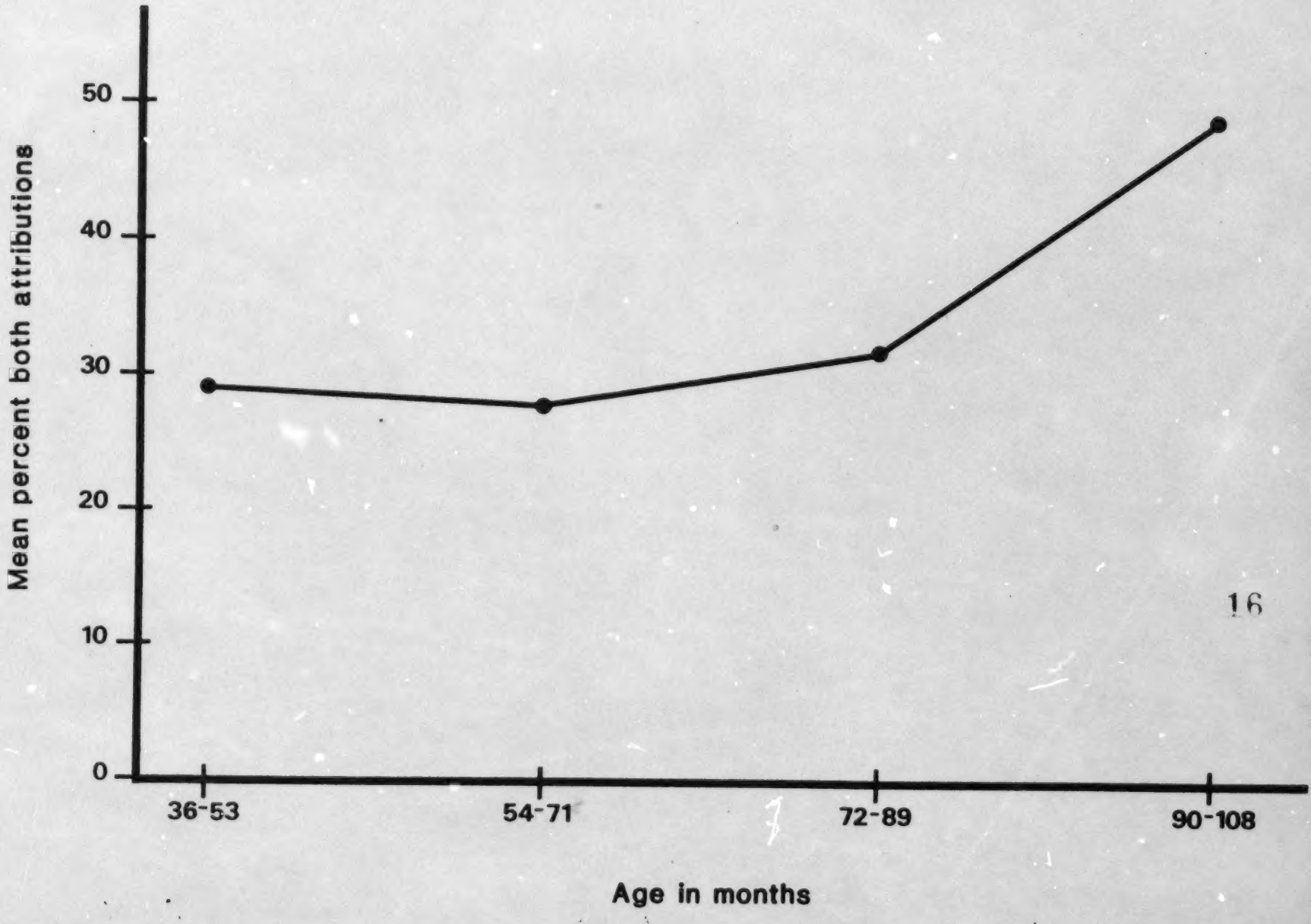
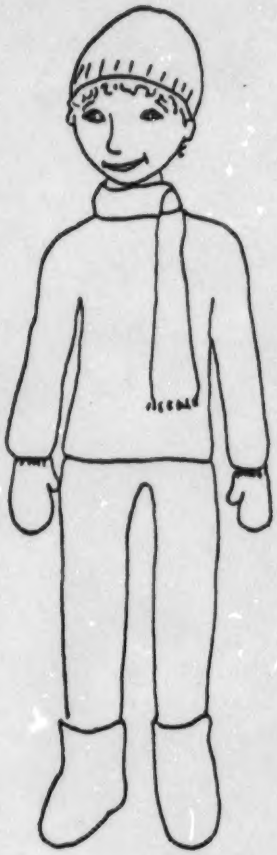
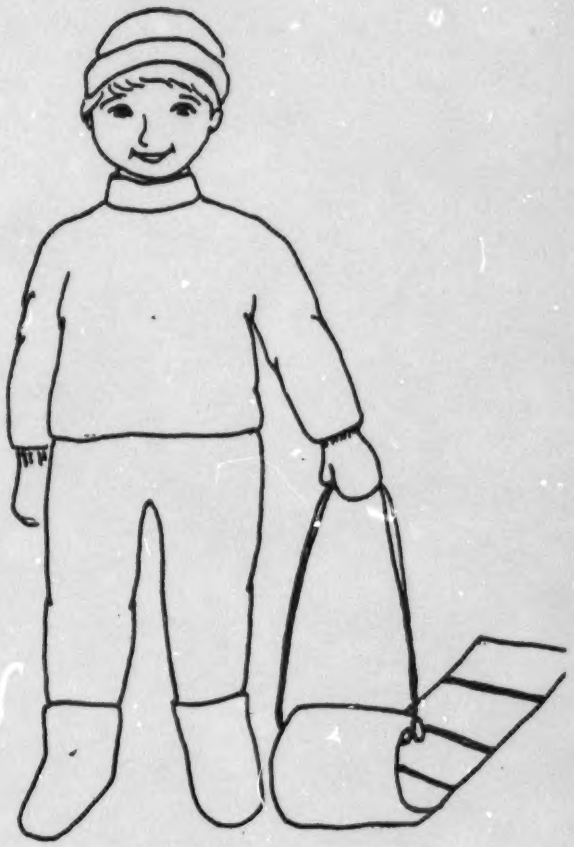
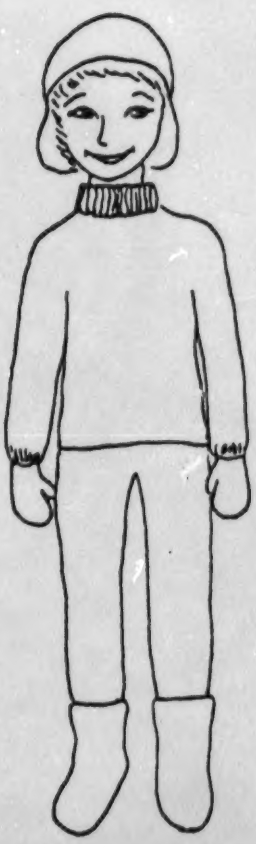


Figure 7







Mean Percent Weight-Based Affiliative Preferences as a Function of Age and Sex

Figure 8